

Proposal for a Soil Management and Reuse Facility (SMRF) to manage the reuse and disposal of tunnel spoil from the West Gate Tunnel Project (WGTP)

About us

Cleanaway's core business is providing an essential service for Australia's waste management and recycling needs. We have a proud history of providing safe and sustainable waste management solutions for more than 200 communities nationwide.

We manage sixteen landfills and specialise in collecting, processing and recycling liquid and hazardous wastes at licenced facilities around the country. We are listed on the Australian Securities Exchange and employ over 4,500 Australians.

Q1. What is Cleanaway proposing?

Cleanaway is proposing to construct a *Soil Management and Reuse Facility (the SMRF)*, adjacent to our Melbourne Regional Landfill in Ravenhall, to manage the reuse and disposal of tunnel spoil (soil and rock) from the West Gate Tunnel Project (WGTP).

Cleanaway has Tendered a solution for the tunnel spoil to be managed in a safe and sustainable manner and is awaiting the outcome of the Tender process.

If we are awarded the Tender, then the construction of the SMRF will take some months to build and operations will commence.

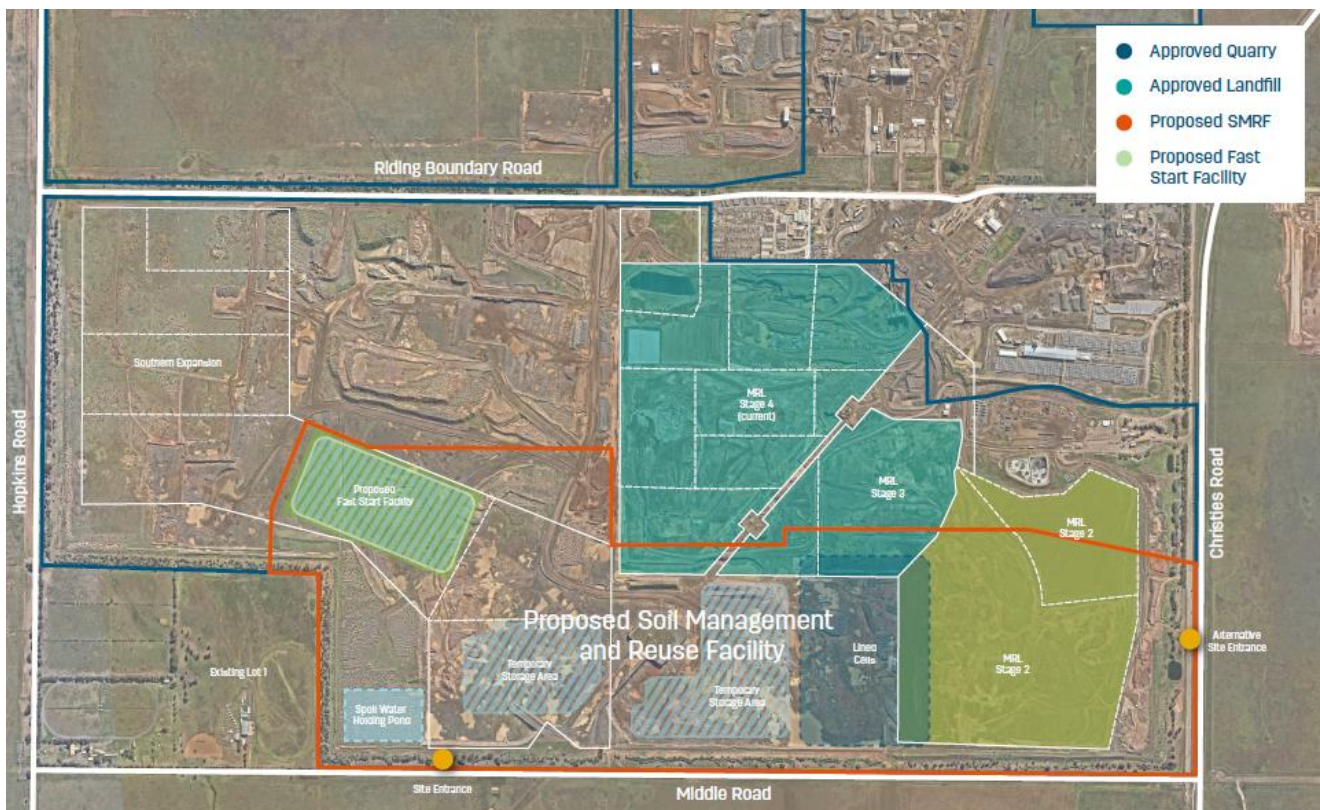
We plan to operate the facility 24 hours a day, 7 days per week, to support the operational continuity of the WGTP, when tunnelling begins.

Q2. Where is the proposed location of the SMRF?

The SMRF will operate within a basalt quarry void, 10 metres below natural ground level, meaning it will be mostly hidden from view.

The area has a long history of industrial, landfilling and quarry uses, and approved buffers to nearest residential areas - *refer to map on next page*.

The site is listed as a 'state significant industrial area' as well as a 'waste and resource recovery hub' by State Government and Melton Council.



Q3. What is the approval process for Cleanaway to construct the SMRF?

Cleanaway sought approval to construct the SMRF from the EPA and Planning Minister. Detailed technical and environmental assessments were undertaken to ensure our proposal is robust and provides a safe solution for the management and reuse of the tunnel spoil.

Our application for Planning Scheme Amendment (Special Conditions Overlay) has been approved by the Minister for Planning under s20(4) of the Planning & Environment Act 1987 (Vic).

On 14 May 2021, the EPA approved our Environmental Management Plan. The EPA approval process includes classifying the tunnel spoil which will determine how it is handled, stored, reused and disposed when it arrives at the SMRF.

Q4. What is the status of the West Gate Tunnel Project (WGTP)?

The WGTP is a major road infrastructure project that will connect the West Gate Freeway, west of the West Gate Bridge, with the Port of Melbourne, CityLink and the central business district (CBD) of Melbourne.

The construction of the WGTP is managed by CPB Contractors and John Holland Joint Venture (CPBJH JV), contracted by Transurban.

The project requires excavation and construction of two tunnels, in-bound and out-bound, and construction of an elevated motorway.

Tunnelling has not started, however work to widen the West Gate Freeway and build the elevated

Footscray Road continues.

Tunnelling will commence when a solution for managing the tunnel spoil is in place. Cleanaway is awaiting the outcome of the Tender process.

Tunnel spoil

When tunnelling commences, approximately 1.5 million cubic metres of tunnel spoil, being wet soil and rock, is expected to be dug out for approximately 16-18 months.

The tunnel spoil is anticipated to have a moisture content up to 60% and can be described as a sludge or slurry.

Initial testing suggests the presence of low levels of PFAS (*Per- and polyfluoroalkyl substances*) in the tunnel spoil. As a result, all the tunnel spoil will be tested following excavation to ensure the spoil is managed safely and in accordance with EPA requirements.

Finding PFAS in soil unearthed during major infrastructure construction is common, especially around former and existing industrial and commercial sites.

The potential for low levels of PFAS in the tunnel spoil will see a rigorous testing regime implemented at an EPA licenced facility prior to its reuse or disposal.

PFAS (Per- and polyfluoroalkyl substances)

PFAS are chemicals that are resistant to grease, oil, water and heat and are commonly used in a wide range of consumer products including:

- water resistant fabrics
- cleaning products
- paints
- non-stick cookware
- food packaging

Sources of PFAS are varied and are often associated with fire-fighting foams, which may have been used in the area overlying the tunnel alignments.

Key points to note about PFAS:

- PFAS contaminated soil can be safely handled under guidelines provided by the EPA.
- Low levels of PFAS in soil are not harmful to the public, during soil removal, relocation or disposal.
- The Australian Government's Expert Health Panel on PFAS found there is limited to no evidence of human disease or other clinically significant harm resulting from PFAS exposure.

(Source: Australian Government Department of Health -

<https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas-expert-panel.htm>)

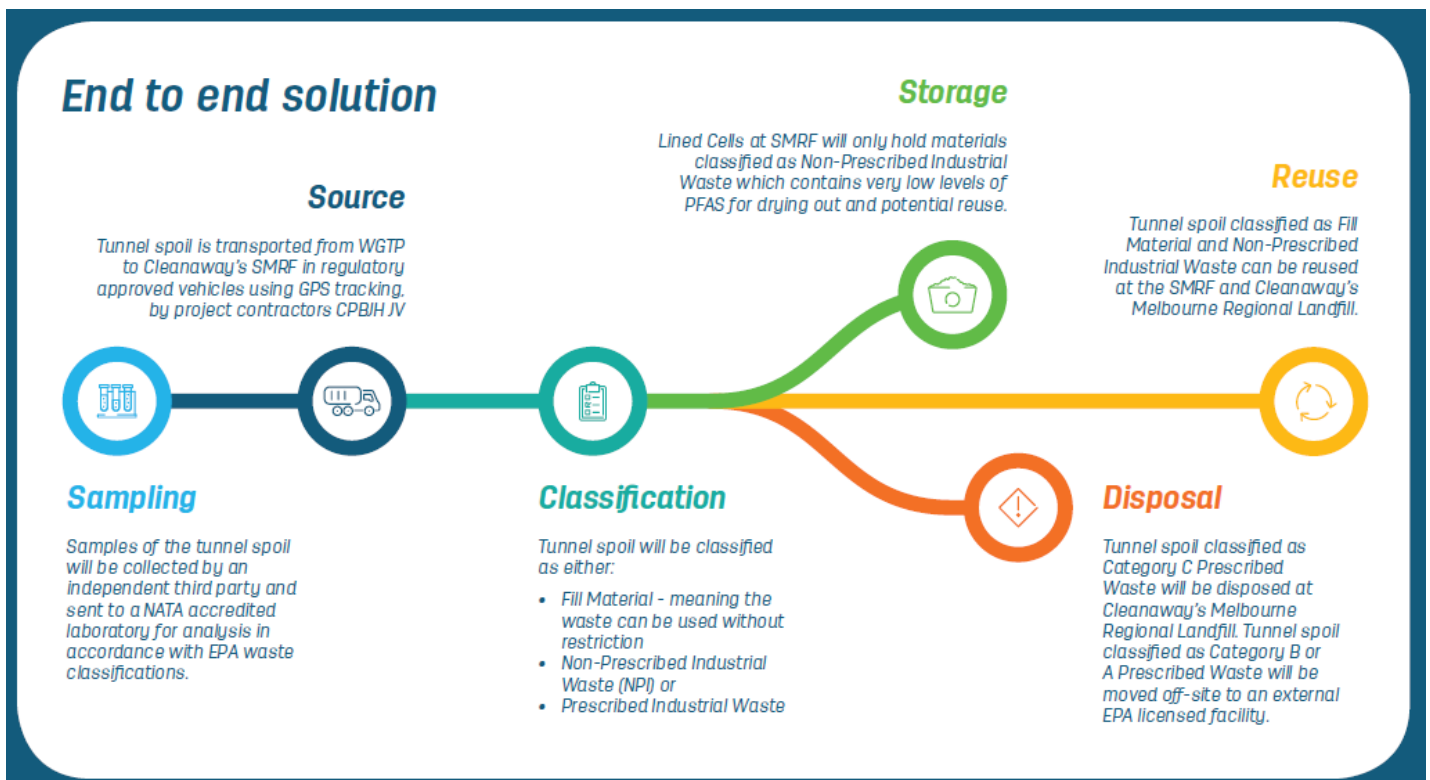
Q5. Why is the SMRF important for the West Gate Tunnel Project?

Cleanaway is providing a conservative, safety focused solution to manage the tunnel spoil and support the operational continuity of the WGTP.

As with all types of waste, it needs safe handling to determine options for disposal and reuse. The SMRF is designed to ensure that the tunnel spoil is contained and managed in a safe environment while classification occurs.

Once classified, the spoil can be reused in accordance with EPA requirements, or disposed at an appropriately licenced waste facility. This ensures reuse is optimised but in a safe and sustainable manner.

The diagram below shows the management process, commencing with sampling at the source, transportation, and management of the tunnel spoil at the SMRF, its reuse and disposal.



Recap of end to end solution:

1. Samples of the tunnel spoil will be collected by an independent third party.
2. The samples will be sent to an independent laboratory for analyses in accordance with EPA waste classifications.
3. After sampling, the tunnel spoil will be transported to the SMRF in approved vehicles.
4. Tunnel spoil classified as Fill Material and Non-Prescribed Industrial Waste can be reused at the SMRF and Melbourne Regional Landfill.
5. **All tunnel spoil classified as Prescribed Industrial Waste will be taken off site to an external EPA licensed facility.**

Q6. How will the tunnel spoil be transported to Cleanaway's SMRF?

After sampling is completed, a material tracking system will be in place to ensure the orderly tracking of transportation of the tunnel spoil from the construction site.

All materials will be transported to the SMRF by CPBJH JV in accordance with all necessary regulatory permits. Trucks will be covered and sealed in line with EPA requirements during transportation.

Trucks will travel along the Western Highway and take the Christies Road exit heading south to Middle Road to enter the SMRF. This route avoids residential areas.

Improvement works are proposed for the section of Middle Road between Christies Road and the site entrance.

Q7. Explain the soil sampling and classification process?

Samples of the tunnel spoil will be collected by an independent third party and sent to a NATA accredited laboratory for analyses in accordance with EPA waste classifications. *(NATA is a national accreditation body for laboratories)*

The independent third party will undertake the waste classifications in accordance with an EPA approved Sampling and Analysis Plan. All waste classifications are reviewed by an independent environmental auditor.

The daily production from each tunnel boring machine will receive a waste classification based on the results of chemical analyses.

Tunnel spoil will be classified as either:

- Fill Material - meaning the waste can be used without restriction
- Non-Prescribed Industrial Waste (NPI) or
- Prescribed Industrial Waste (PIW)

Tunnel spoil classified as Non-Prescribed Industrial Waste contains very low levels of PFAS and can be held in lined cells to dry out for reuse in accordance with the EPA's reuse guidance.

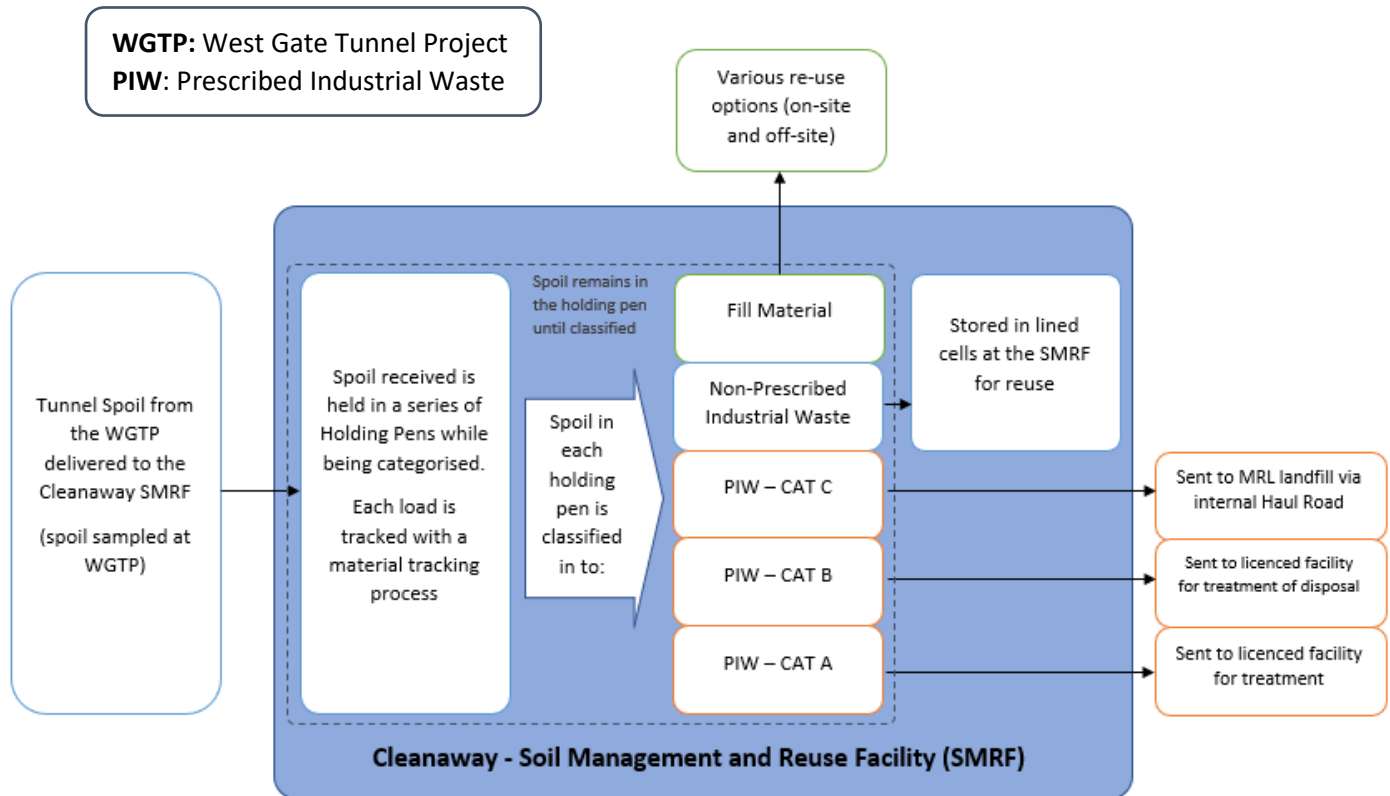
- Tunnel spoil classified as Fill Material and Non-Prescribed Industrial Waste can be reused at the SMRF and Melbourne Regional Landfill.
- Prescribed Industrial Waste will be taken off site to an external EPA licensed facility.

Q8. How will the tunnel spoil be handled, reused and disposed?

Upon arrival at Cleanaway's SMRF, trucks will be directed to a lined holding pen allocated to the specific tunnel boring machine for that day of spoil production.

The tunnel spoil will remain in the holding pen until the classification results are available. The spoil will then be managed according to its classification.

The flow chart below explains the process for managing the tunnel spoil including the classification for disposal and reuse.



Holding pen

The holding pens will be constructed with trafficable pavement, undrains and lining systems to act as a wearing surface for delivery and removal of tunnel spoil from the pens.

Each pen will be engineered to hold approximately 3,800 m³ of tunnel spoil at one time, until the spoil in the pen is classified under the EPA Waste Classification criteria (IWRG 621).

Underlying the wearing surface will be an additional lining layer including a drainage layer underlain by a low permeability liner or geomembrane to stop water movement to depth below the Holding Pens.

Lined cell

Lined cells will be constructed using engineered lining and capping systems, consistent with EPA approved designs required for storage and drying out of Category C prescribed wastes, prior to reuse.

The lined cells will not take any Prescribed Industrial Waste – these will be removed from the SMRF and taken to an EPA licensed facility.

Each cell will include a drainage spoil water collection system to ensure liquid that has been in contact with the tunnel spoil is captured and managed to protect the surrounding environment

Q9. how will you mitigate any environmental impacts?

Cleanaway employs environmental specialists, construction engineers and highly experienced operators to conduct rigorous and ongoing construction and monitoring activities at the site to ensure we meet environmental compliance standards and can respond to any issues as a matter of priority.

Spoil water

Water that is been in contact with the tunnel spoil is called spoil water and will be transferred to a lined settlement pond, to allow removal of sediment. Spoil water will then be pumped to a lined holding pond.

Any water associated with the tunnel spoil will be decanted from the holding pens and lined cells and put through an onsite water treatment plant to remove PFAS concentrations.

Sources of spoil water include:

- Water released from tunnel spoil or associated with the degradation of foaming agents in the holding pens and lined cells
- Rainwater in the holding pens, lined cells, sediment pond and evaporation pond
- Water extracted from the basal and side-lining systems of the lined cells
- Water discharged into the sediment pond and evaporation pond

Dewatering systems will be incorporated into the lined cells to encourage removal of water from the tunnel spoil. Additional mechanical drying involving spreading and windrowing of the tunnel spoil, if required, will be conducted in the holding pens.

Treated water will be reused onsite for dust suppression, construction purposes or discharged to stormwater.

Groundwater management

The SMRF will be located in the floor of a quarry, which allows any water associated with the facility to be easily contained and discharged to the surface water system surrounding the site, in compliance with the relevant standards.

Rainwater into the facility will be controlled by bunding and the proposed haul road and holding pens being raised above the quarry floor.

Surface water management

A Surface Water Management Plan will be developed to document all surface water management controls. The control system will be designed to capture clean run-off water for operational uses.

Due to the rate that spoil water may be generated, a water treatment plant will be commissioned at the facility to remove PFAS from water to allow discharge of treated water to surface water.

These methods for treatment of contaminated water for discharge to surface water have been proven at other sites.

Typical surface water management would comprise:

- Diversion channels and swales to storage ponds and discharge ponds.
- Bunding of any fuels or chemicals stored.
- Sediment traps.
- Surface water monitoring

Traffic Management

A Traffic Management Plan will be developed prior to the commencement of the operation. The plan will set out protocols for the safe movement of delivery vehicles, haulage vehicles and light vehicles at the SMRF.

All delivery trucks will be required to pass through the wheel wash located at the site entrance prior to departure.

Q10 How will Cleanaway keep the community updated?

Cleanaway is genuinely interested in engaging with the community and provides a range of services as part of our ongoing commitment to keeping you informed and supporting our local community:

- Our dedicated [information page](#) on our website contains a range of information about our proposal, please visit www.cleanaway.com.au/SMRF
- [Community Information Webinars](#) are available to you to speak directly with us about our proposal. You can register to attend a session on our website using the link above.
- Our [24-hour community hotline 1800 213 753](#) is available to give us feedback on any matters of concern about our operations.
- [Community Information Centre](#) at the Melbourne Regional Landfill is available to peruse information. To arrange a visit please see contact details below.
- [Melbourne Regional Landfill Community Reference Group \(MRLCRG\)](#). Cleanaway hosts quarterly meetings with residents and representatives from Stop the Tip, EPA, Brimbank and Melton Councils, and Cleanaway management. If you are interested in joining please see contact details below.
- Cleanaway provides [waste management education programs](#) for students to understand sustainable practices and how waste is managed in the community.
- We also support our local community through [sponsorships and community grants](#).

For further information, please contact our [Stakeholder and Community Engagement Manager Olga Ghiri](#) on 0478 316 237 or email olga.ghiri@cleanaway.com.au.